

PRIOR ART

FIG. 1

GREEN 1,1	RED 1,2	GREEN 1,3	RED 1,4	GREEN 1,5	GREEN 1,797	RED 1,798	GREEN 1,799	RED 1,800
BLUE 2,1	GREEN 2,2	BLUE 2,3	GREEN 2,4	BLUE 2,5	BLUE 2,797	GREEN 2,798	BLUE 2,799	GREEN 2,800
GREEN 3,1	RED 3,2	GREEN 3,3	RED 3,4	GREEN 3,5	GREEN 3,797	RED 3,798	GREEN 3,799	RED 3,800
BLUE 4,1	GREEN 4,2	BLUE 4,3	GREEN 4,4	BLUE 4,5	BLUE 4,797	GREEN 4,798	BLUE 4,799	GREEN 4,800
• • • • •					• • •			
GREEN 599,1	RED 599,2	GREEN 599,3	RED 599,4	GREEN 599,5	GREEN 599,797	RED 599,798	GREEN 599,799	RED 599,800
BLUE 600,1	GREEN 600,2	BLUE 600,3	GREEN 600,4	BLUE 600,5	BLUE 600,797	GREEN 600,798	BLUE 600,799	GREEN 600,800

PRIOR ART

FIG. 2

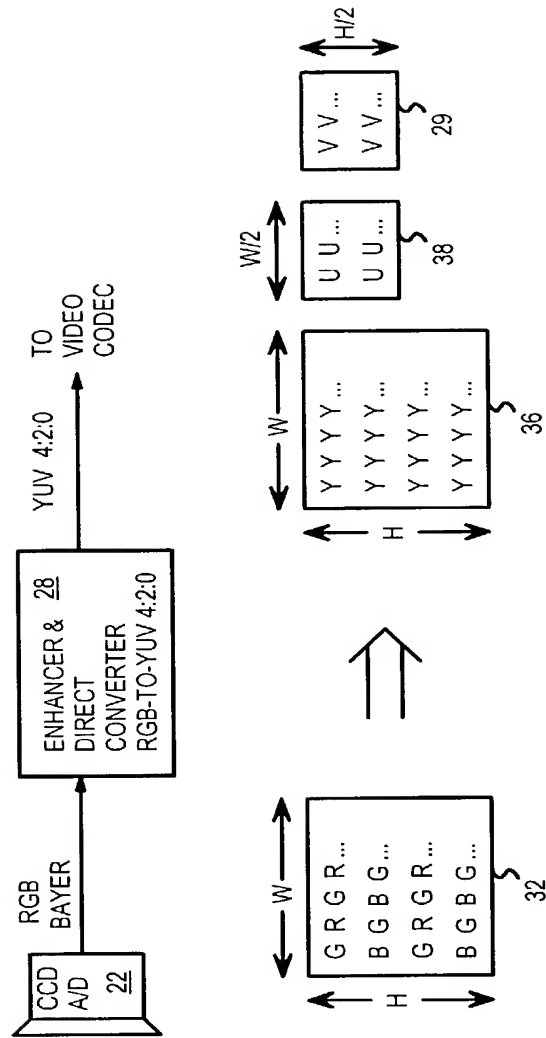


FIG. 3

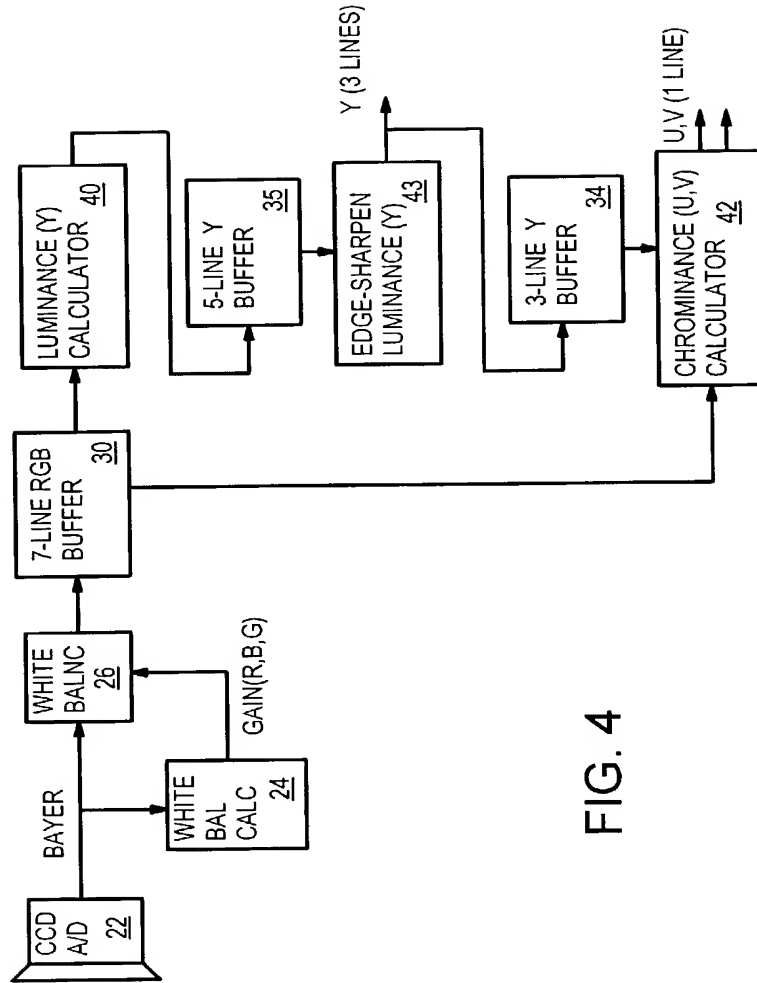
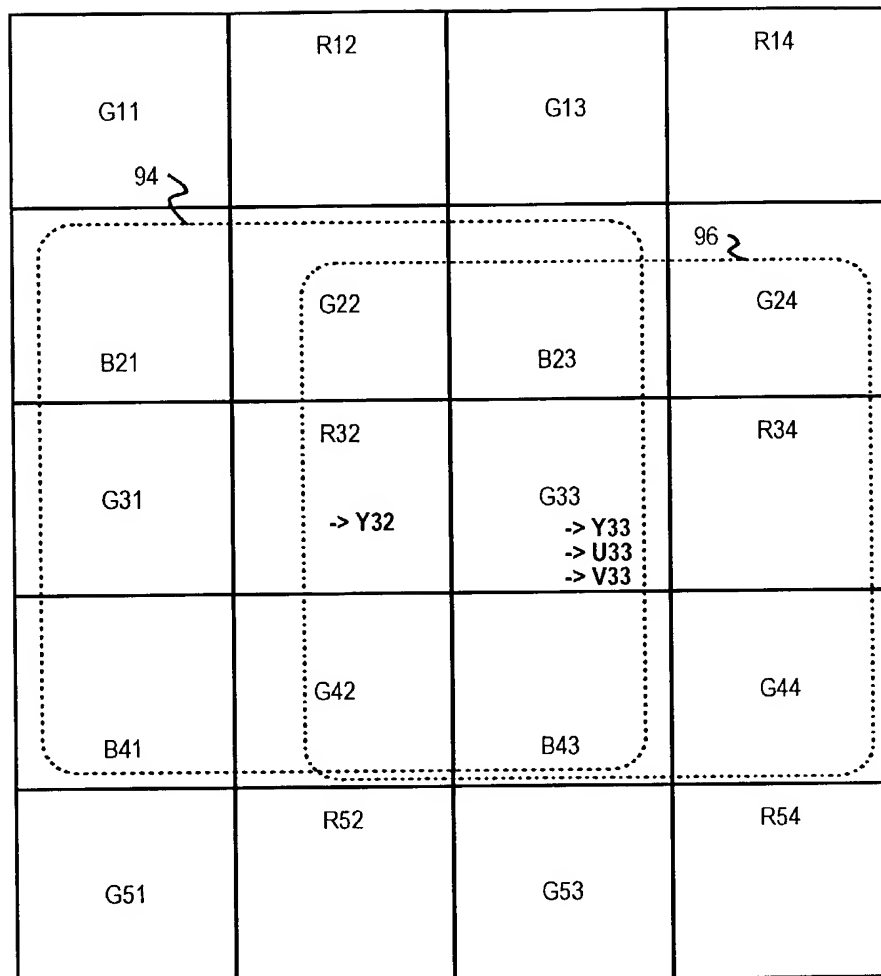
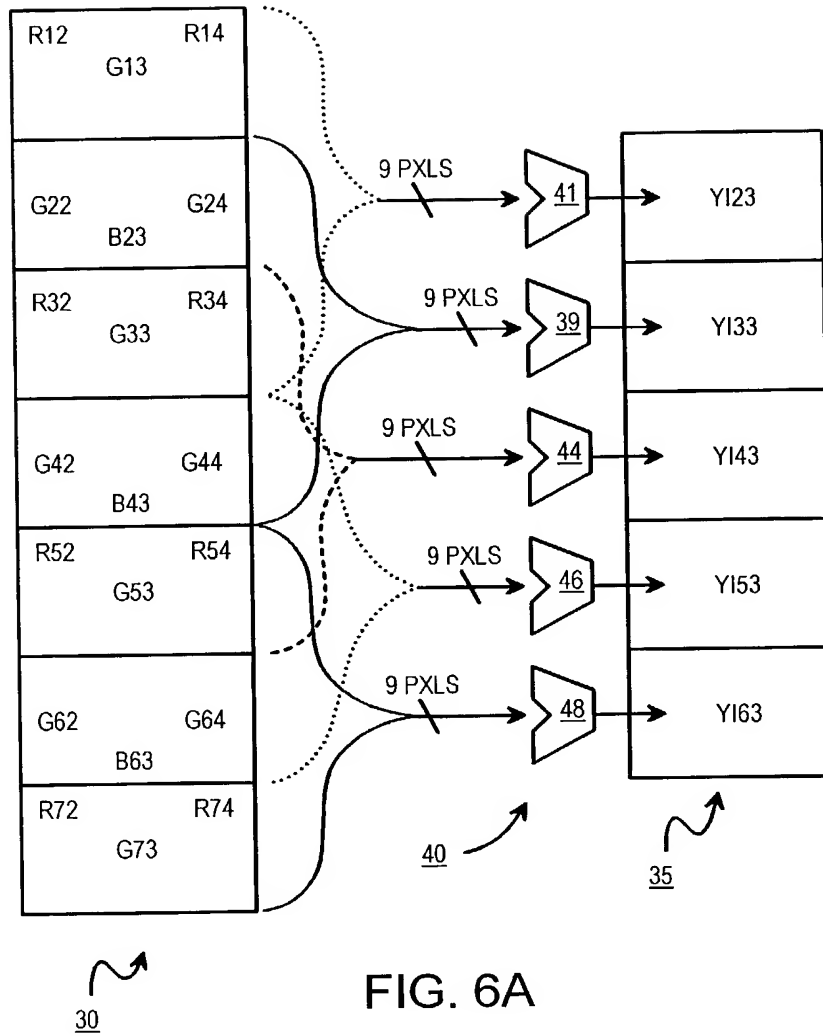


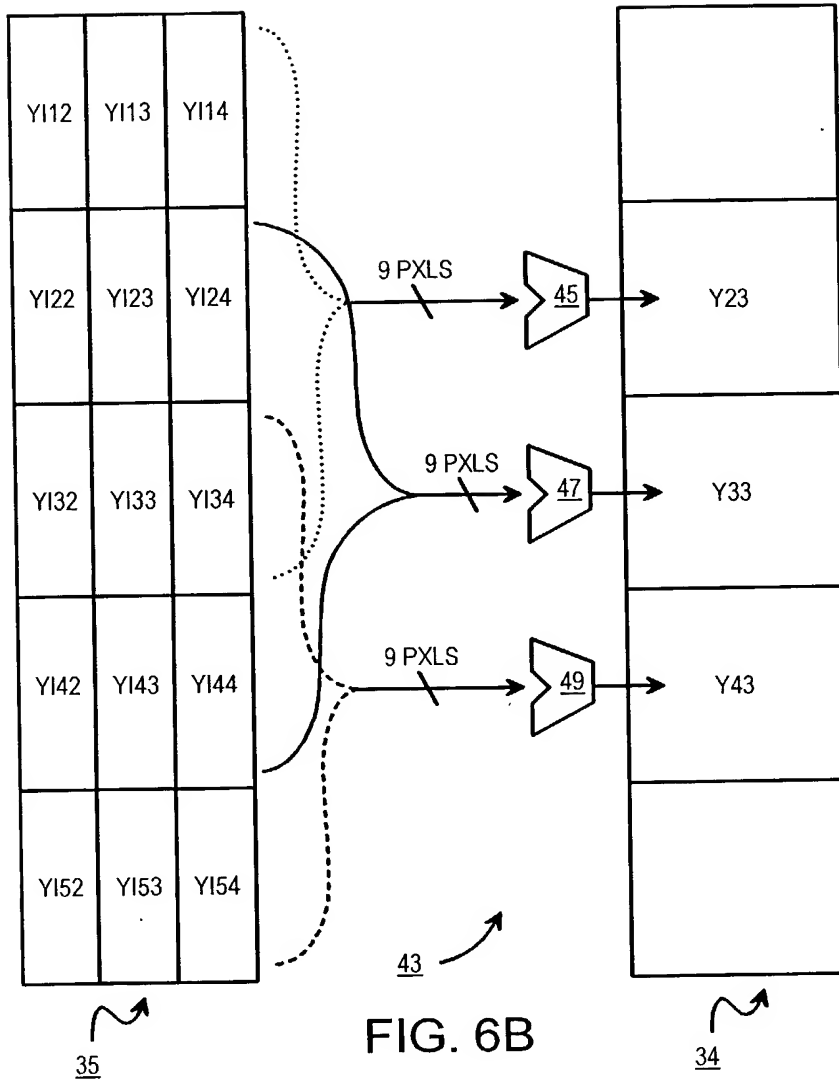
FIG. 4



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FIG. 5





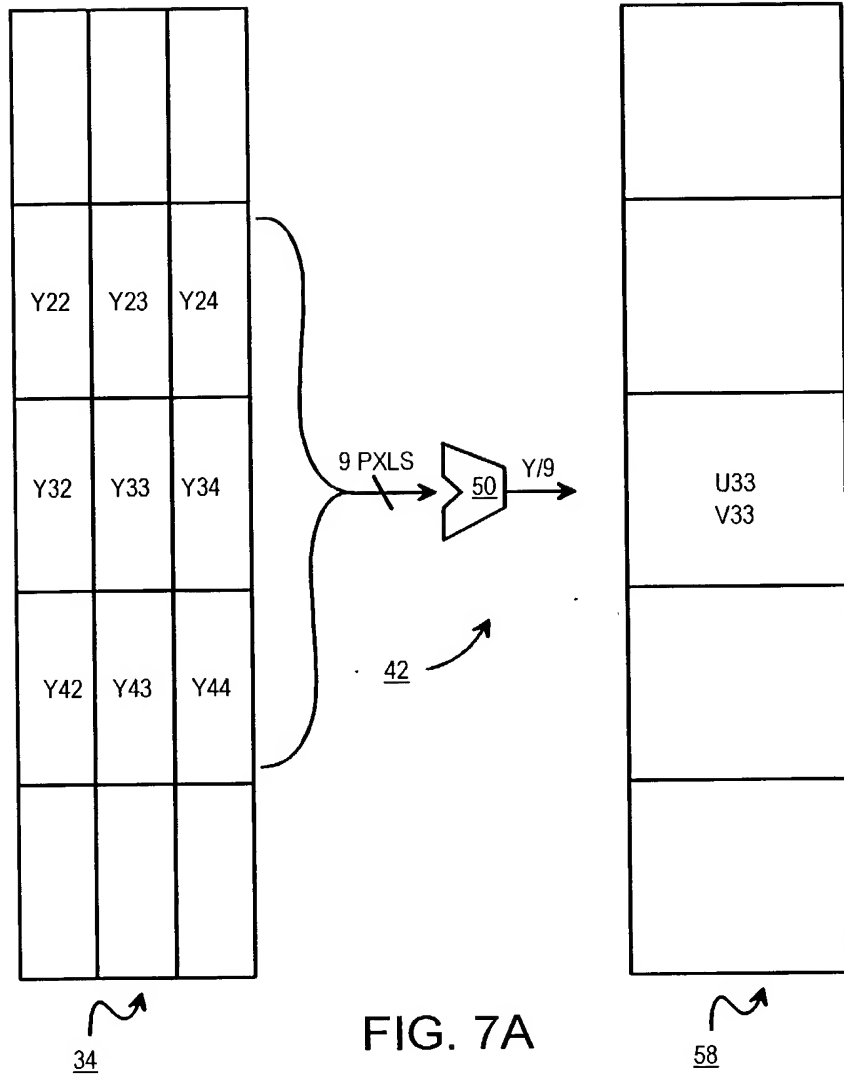
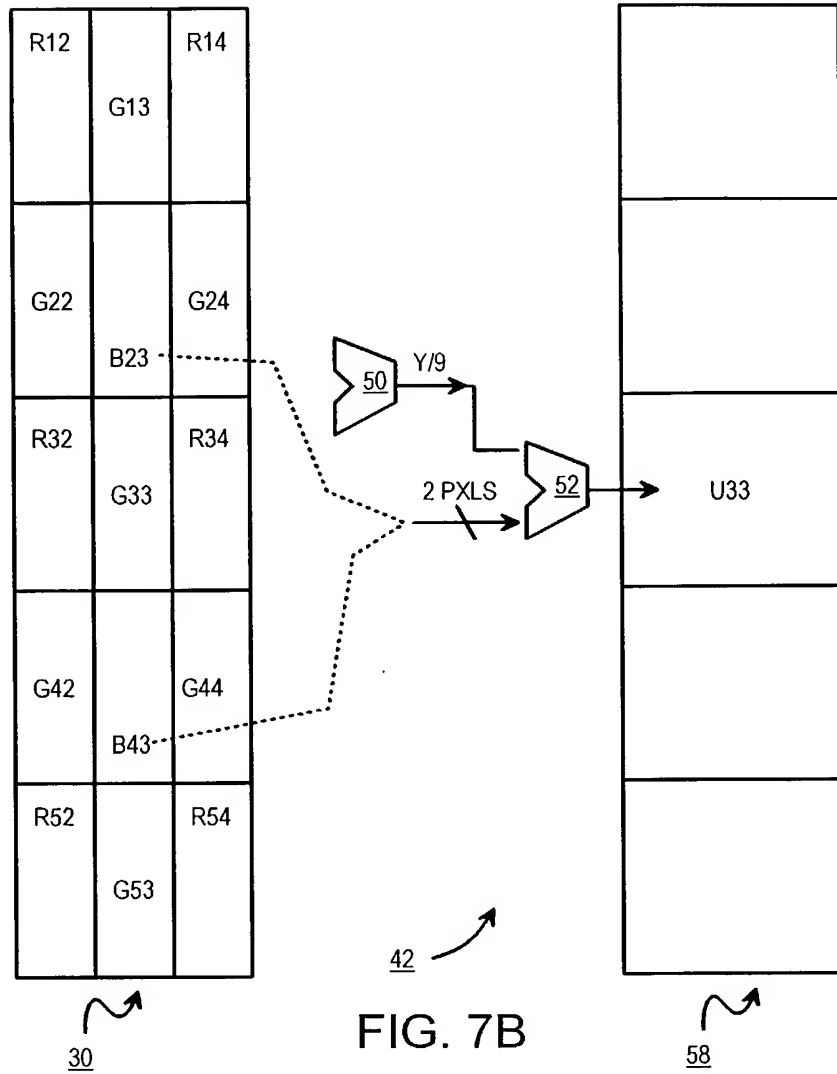


FIG. 7A





INITIAL LUMINANCE COMPUTATION (YI)

C = 0.299, D = 0.587, E = 0.144

G R G	R G R	B G B	G B G
B G B	G B G	G R G	R G R
G R G	R G R	B G B	G B G
PATTERN 1	PATTERN 2	PATTERN 3	PATTERN 4
D/8 C/2 D/8	C/4 D/4 C/4	E/4 D/4 E/4	D/8 E/2 D/8
E/2 D/2 E/2	D/4 E D/4	D/4 C D/4	C/2 D/2 C/2
D/8 C/2 D/8	C/4 D/4 C/4	E/4 D/4 E/4	D/8 E/2 D/8
COEFF FOR PATTERN 1	COEFF FOR PATTERN 2	COEFF FOR PATTERN 3	COEFF FOR PATTERN 4

FIG. 8A

FIG. 8B

FIG. 8C

FIG. 8D

EDGE SHARPENING FOR LUMINANCE

YI YI YI
YI YI YI
YI YI YI

INITIAL Y PATTERN

FIG. 9A

-1/16 -2/16 -1/16
-2/16 12/16 -2/16
-1/16 -2/16 -1/16

COEFF FOR
EDGE SHARPENED Y

FIG. 9B

CHROMINANCE COMPUTATION

	1/9 1/9 1/9
G B G	1/9 1/9 1/9
R G R	1/9 1/9 1/9
G B G	
	COEFF FOR
PATTERN 4	INTERMEDIATE
	SUM (Y/9)

FIG. 10A

FIG. 10B

0 1/2 0
0 0 0
0 1/2 0
COEFF FOR
INTERMEDIATE
SUM (S_U)

FIG. 10C

0 0 0
1/2 0 1/2
0 0 0
COEFF FOR
INTERMEDIATE
SUM (S_V)

FIG. 10D

FIG. 10E

$$U = 0.493 \times (S_U - Y/9)$$

$$V = 0.877 \times (S_V - Y/9)$$

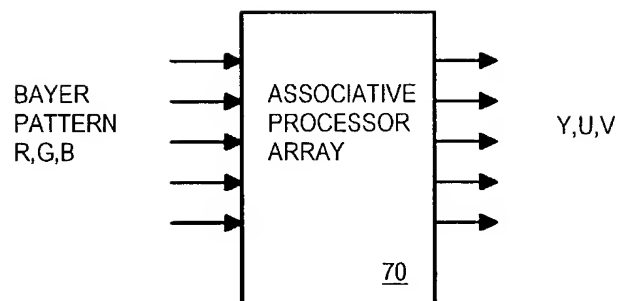


FIG. 11A

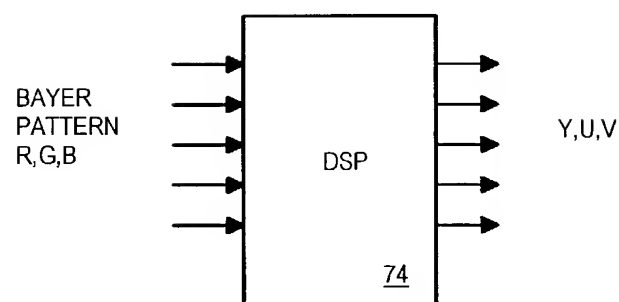


FIG. 11B

CHROMINANCE COMPUTATION FOR B-G-B PATTERN

B G B
G R G
B G B

PATTERN 3

FIG. 12A

1/9 1/9 1/9
1/9 1/9 1/9
1/9 1/9 1/9

COEFF FOR
INTERMEDIATE
SUM (Y/9)

FIG. 12B

1/4 0 1/4
0 0 0
1/4 0 1/4

COEFF FOR
INTERMEDIATE
SUM (S_U)

FIG. 12C

0 0 0
0 1 0
0 0 0

COEFF FOR
INTERMEDIATE
SUM (S_V)

FIG. 12D

FIG. 12E

$$U = 0.493 \times (S_U - Y/9)$$

$$V = 0.877 \times (S_V - Y/9)$$